

<b>DOCKETED</b>	
<b>Docket Number:</b>	21-BUSMTG-01
<b>Project Title:</b>	Business Meeting Agendas, Transcripts, Minutes, and Public Comments
<b>TN #:</b>	240056
<b>Document Title:</b>	October 13 2021 Business Meeting Presentation
<b>Description:</b>	N/A
<b>Filer:</b>	Dorothy Murimi
<b>Organization:</b>	California Energy Commission
<b>Submitter Role:</b>	Commission Staff
<b>Submission Date:</b>	10/13/2021 8:45:21 AM
<b>Docketed Date:</b>	10/13/2021



# **California Energy Commission Business Meeting October 13, 2021 10:00 a.m.**



# **Pledge of Allegiance**



**I pledge allegiance to the Flag  
of the United States of America,  
and to the Republic for which it stands,  
one Nation under God, indivisible,  
with liberty and justice for all.**



# Get vaccinated. Wear a Mask.

**Your actions save lives**  
**Keep California healthy**

**GET VACCINATED** 







# Remote Compliance

Business Meeting held remotely, consistent with **Executive Order N-08-21** to continue to help California respond to, recover from, and mitigate the impacts of the COVID-19 pandemic. The public can participate in the Business Meeting consistent with the direction in this Executive Order.

For remote participation instructions visit **CEC's Business Meetings webpage**:

<https://www.energy.ca.gov/proceedings/business-meetings>

If Zoom's toll-free phone numbers don't work:

- **Dial: (669) 900-6833**
- **Meeting ID: 938-6923-0237**



# Public Comment Instructions

- Pursuant to **California Code of Regulations Title 20 §1104(e)**, any person may make oral comment on any agenda item.
- Comments may be limited:
  - **to 3 minutes** or less
  - **1 representative** per organization
- Any person wishing to comment on information items or reports (non-voting items) shall reserve their comment for the general public comment portion of the meeting agenda.

## Zoom App/Online

Click “raise hand”

## Telephone

Dial (669) 900-6833 or (888) 475-4499 Enter Webinar ID: 938 6923 0237

- Press \*9 to raise hand
- Press \*6 to (un)mute

## When called upon

Public Advisor will open your line

Unmute, spell name and state affiliation, if any, for the record, then begin your comments



# Consent Calendar a. – b.

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- a. Veloz. Proposed resolution approving Agreement 600-21-004 with Veloz for a \$100,000 contract which provides the CEC membership for one year. Contact: Sharon Purewal
- b. The Regents of the University of California, on Behalf of the Davis Campus. Contact: Tim Olson



# **Item 2: New Solar Homes Partnership Program Completion Update**

October 13, 2021  
Business Meeting

Geoffrey Dodson, NSHP Program Lead  
Renewable Energy Division, Technology & Incentives Office



# NSHP Program Overview



- Install solar on 50% new homes by 2020
- Foster self-sustaining solar homes market
- Provide “bridge” to achieve California’s goal for zero net energy homes
- Contributed to the Million Solar Roofs initiative







# Spring Lake Affordable Housing

- Nation's first zero net energy (ZNE) rental community
- 62 residential units in Woodland
- System Size: 184.88 kW
- Incentive: \$346,223





# Heritage Commons Affordable Housing

- 60 residential units in Dixon, CA
- System size: 39.35 kW
- Incentive: \$36,043







# NSHP Program Impacts

- Contributed to self-sustaining solar market
- Support for affordable housing projects
- \$241 million in incentives paid
- 233 MW new solar energy capacity





# **Item 3 – Order Instituting Rulemaking Proceeding (2021- AAER-01)**

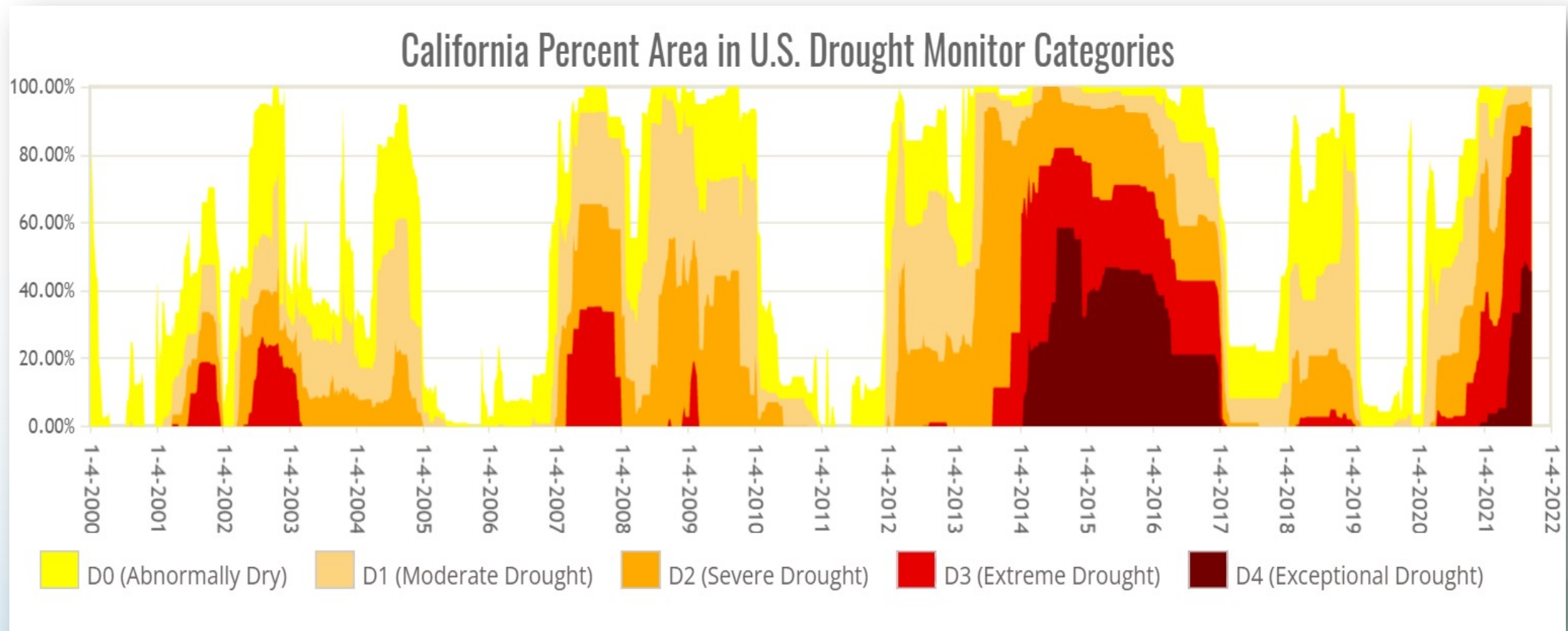
October 13, 2021 - Business Meeting

Jessica Lopez, Air Resources Engineer  
Efficiency Division, Appliances Office



# Benefits to Californians

- Reduces water and energy consumption
- Helps meet California's water resilience goals







# Continuous Flow Dipper Wells

- Flow rate varies from 0.2 gpm to 1 gpm
- Operates continuously during business hours
- Equivalent to 4 – 20 bathtubs per day

**Figure 1. Continuous Dipper Well**





# Preliminary Assessment

Assessment Details	Evaluation Results
Significant Water Savings	~5.5 billion gallons per year
Significant Energy Savings	~19.6 GWh per year of embedded energy ~25 million therms per year of natural gas
Technically Feasible	Yes, water-efficient products available

**Figure 2. Heated Manual Refill Dipper Well**





# Staff Recommendation

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Approve Order Instituting Rulemaking for dipper wells



# **Item 4: Solar Energy Generating System Units (SEGS) IX – X Petition To Amend**

October 13, 2021, Business Meeting

Presented by Elizabeth Huber, Compliance Monitoring and Enforcement Office Manager

John Heiser, Compliance Project Manager

Kerry Willis, Assistant Chief Counsel

Siting, Transmission and Environmental Protection Division





# Benefits to Californians

## SEGS X bordering SEGS IX and Transmission Line



## SEGS X Cement Foundations built in 1991 and construction halted







# Overview

Date	Action
2/14/1990	CEC Approved SEGS IX – X License
10/01/1990	SEGS IX Comes Online
3/1/1991	Project Owner Decides not to Construct SEGS X
9/11/2020	Petition Filed to Remove SEGS X from the SEGS IX – X License



# Staff Recommendation

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Approve petition to:

- modify site boundary to exclude area of SEGS X
- end CEC's jurisdiction over SEGS X site



# **Item 5: 2022 Title 20 Data Collection Regulation Modifications**

October 13, 2021 Business Meeting

Ryan Eggers, Transportation Fuels Data & Analysis Unit  
Energy Assessments Division, Data Integration & Policy Office



# Benefits to Californians

**Help ensure reliability & advance state energy goals**





# Overview

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## New Data Asks:

- Hydrogen, biodiesel, and renewable diesel production data
- Property Assessed Clean Energy (PACE) data
- Natural gas storage system data

## General Regulations Cleanup:

- Changed data submission procedures
- Modernized general language
- Changed confidentiality process





# Public Comments

- Followed standard process to solicit public input
  - 45-day comment period
  - Public Hearing
- No opposition comments
- Staff proposes no changes to Express Terms





# Workplan

<b>Pre-Rulemaking Workshop</b>	<b>October 27, 2020</b>
<b>Continued Stakeholder Outreach and Finalizing Rulemaking Materials</b>	<b>November 2020 to May 2021</b>
<b>Opening Phase 2 Data Rulemaking Activities (submit rulemaking materials with Office of Administrative Law)</b>	<b>June 18, 2021</b>
<b>45-Day Comment Period</b>	<b>June 18 to August 2, 2021</b>
<b>Public Hearing</b>	<b>August 6, 2021</b>
<b>Adoption of Rulemaking Package by Commissioners</b>	<b>October 13, 2021</b>
<b>Adopted Rulemaking Package sent to OAL</b>	<b>October 2021</b>
<b>Enacted Regulations</b>	<b>January 1, 2022</b>



# Next Steps

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- Finalize rulemaking package and send to Office of Administrative Law by end of October 2021
- Publish final rulemaking materials to docket and close docket after OAL approval
- Regulations on track to be in effect January 1, 2022



# Item 6: Stratosfuel, Inc.

October 13, 2021 Business Meeting

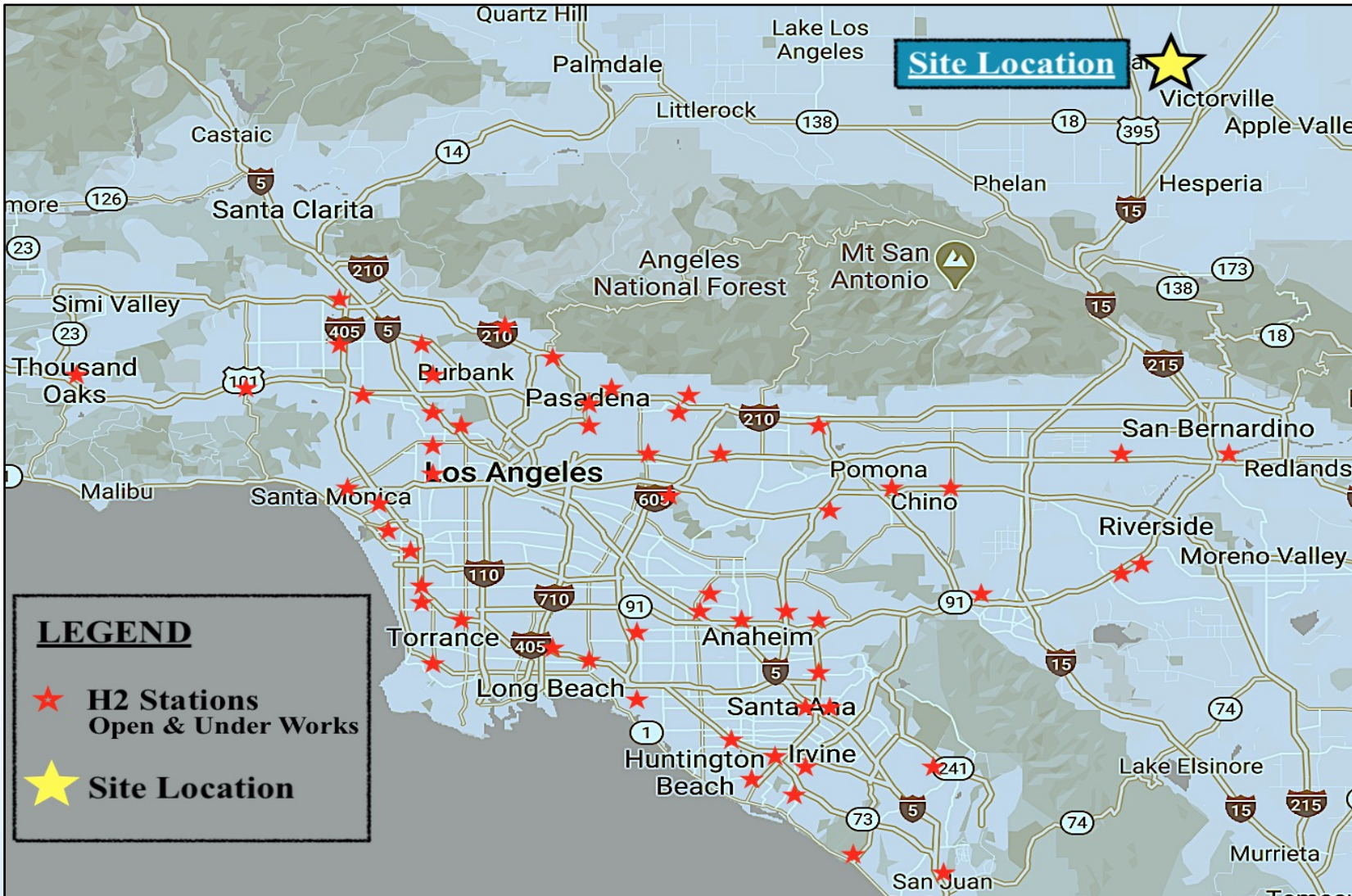
Andrew Hom, Air Resources Engineer  
Fuels and Transportation Division, Medium- and Heavy-Duty Zero Emission  
Technologies Office





# Overview

## Stratosfuel Potential Customers



- Increase in-state production of 100% renewable hydrogen
- Improve reliability of hydrogen fuel supply
- Reduce 24,000 tons of CO<sub>2</sub>e annually
- Move towards zero carbon hydrogen future



# Overview (Amendment)

## Amendments:

- Change site location to City of Victorville
- Reallocate budget
- Extend for 17 months at no-cost





# Market Potential

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## Current Estimates:

Fuel Cell Electric Vehicles (FCEV) on the road:  
8,935

- Hydrogen demand: 6,250 kgs/day

## Future Estimates:

- 2024 FCEV population: 30,800
- 2024 Hydrogen Demand: 21,560 kgs/day

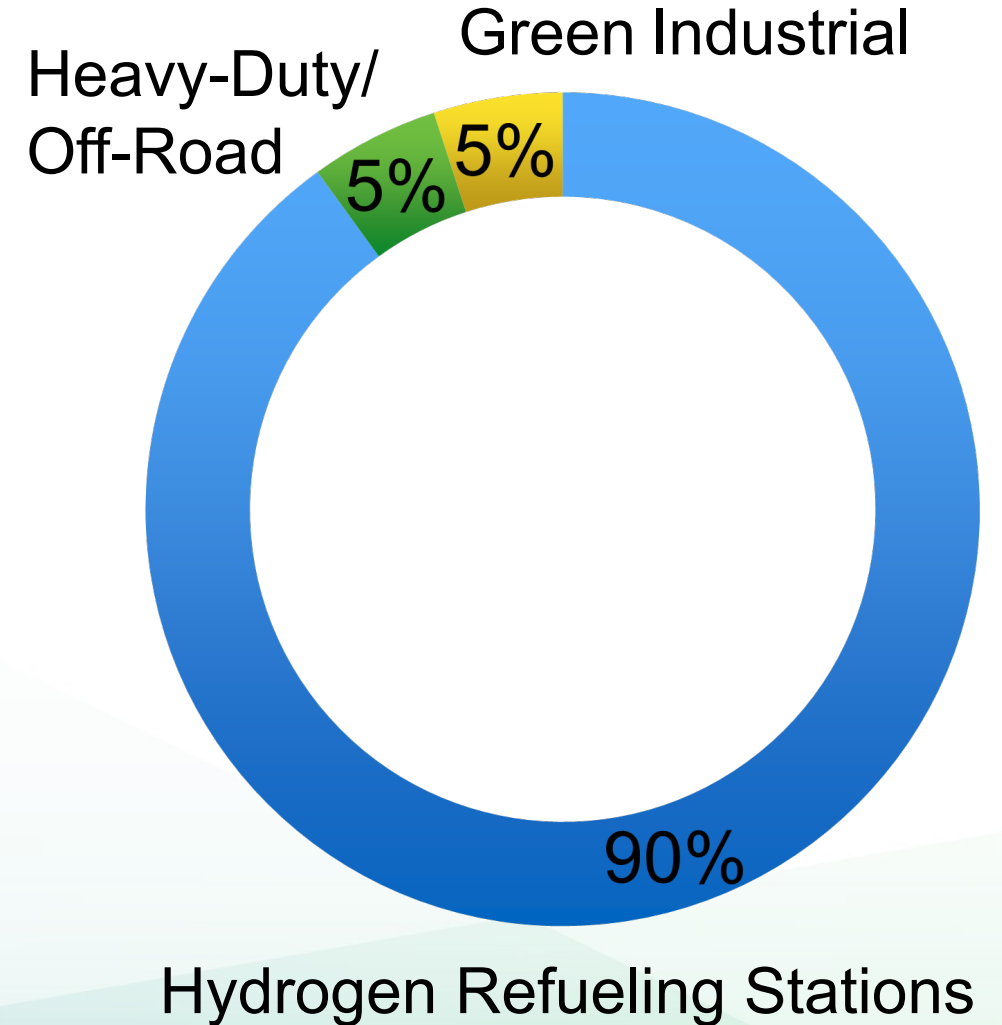


# Customer & Market Demographics

90% of customers are hydrogen refueling stations

Some customers will use fuel for heavy-duty on-road vehicles

- Off-road vehicles, such as material handling, maritime, and trains
- Green industrial customers





# Staff Recommendation

## Approve

- Amendment #1 to agreement with Stratosfuel, Inc.

## Adopt

- Staff determination on CEQA findings



# **Item 7b: Zero-Emission Transit Fleet Infrastructure Deployment (GFO-20-602)**

October 13, 2021 Business Meeting

Esther Odufuwa, Energy Commission Specialist I  
Fuels and Transportation Division  
Medium and Heavy Duty Zero Emission Technologies Office, Freight & Transit Unit



# Benefits to California



Replicable solutions

Reduce emissions

Increase resilience





# LADOT Project Overview

City of Los Angeles Department of Transportation (ARV-21-041)

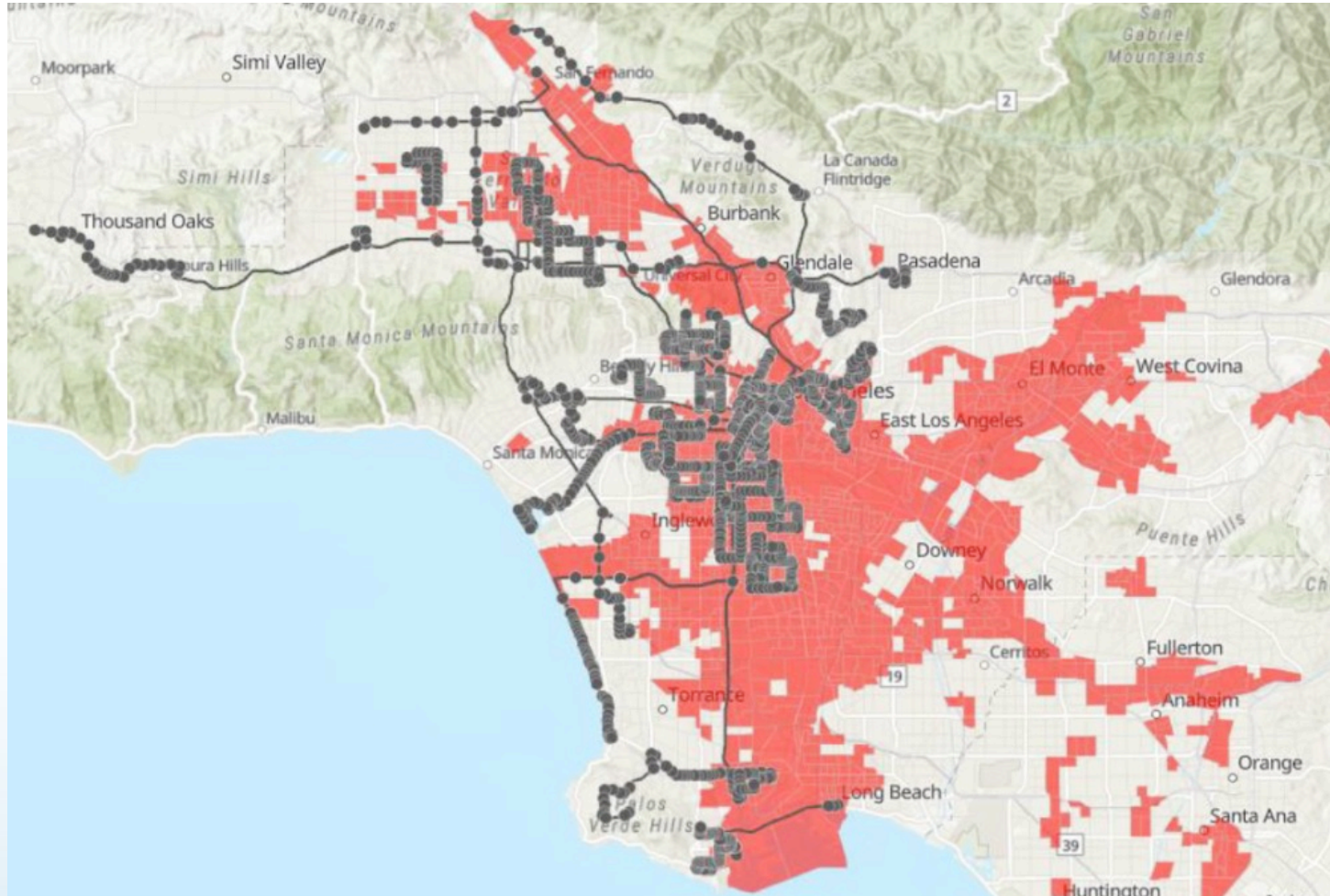


Photo credit: La Department of Transportation





# LADOT Microgrid Project Overview

MD/HD Electric  
Charging  
Infrastructure  
Microgrid Project at  
LADOT Washington  
Yard



1.54 MW Installed Solar

Photo credit: Los Angeles Department of Transportation

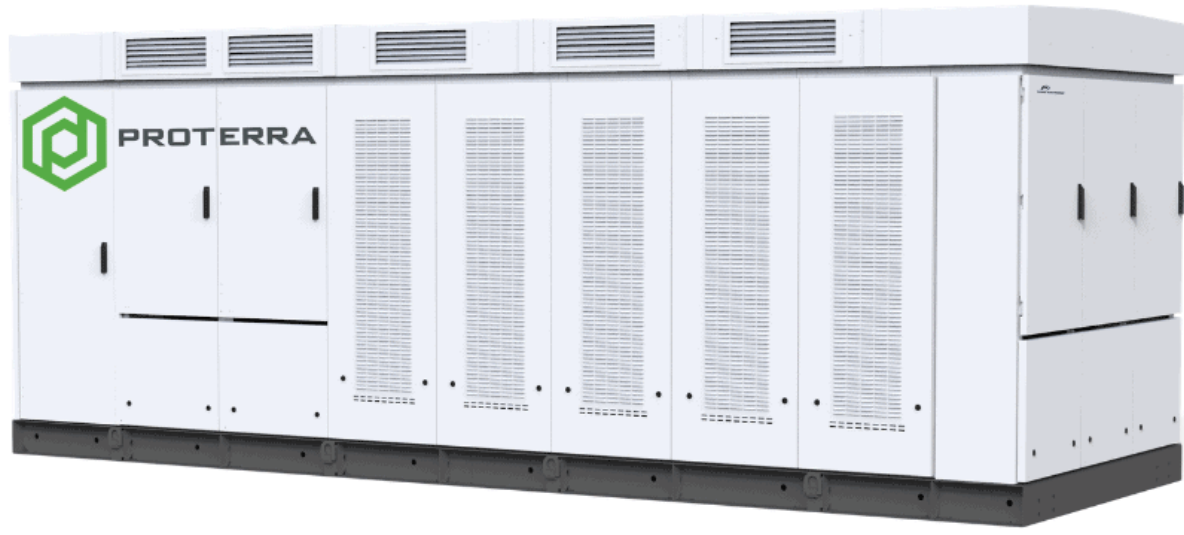


Rendering of solar canopy at Washington bus yard



# Proterra Project Overview

## Proterra 1.5 MW Chargers



## Proterra Charging Dispensers







# LADOT Battery Energy Project Overview

4.5 MWh / 2MW

Battery Energy  
Storage System



Photo credit: Los Angeles Department of Transportation



# California Market Potential



**≈ 11,500**

transit buses in California

**≈ 700 MW**

flexible capacity

**≈ 700,000**

homes could be powered





# Staff Recommendation.

## Approve

- 1 grant agreement for \$6 million

## Adopt

- Staff's determination that project is exempt from CEQA



# **Item 8: Momentum Dynamics Corporation**

October 13, 2021 Business Meeting

Kate Reid, Air Resources Engineer  
Fuels and Transportation Division, Freight & Transit Unit



# Benefits to Californians

- Innovate charging
- Accelerate commercialization
- Increase green solutions



Source: EVmatch



Source: CalMatters



Source: Electrek



# Momentum Dynamics Corporation (ARV-21-036)

- Deploy 7 wireless chargers to serve 13 electric buses
- Demonstrate benefits of automated wireless charging



FIGURE 1: MD CHARGING SYSTEM IN-FIELD WITH CLOSE-UPS OF VEHICLE AND GROUND ASSEMBLY





# Staff Recommendation.

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- Approve Momentum Dynamics agreement
- Adopt staff's determination that action is exempt from CEQA



# **Item 9: Blueprints for MD/HD ZEV Infrastructure (GFO-20-601)**

Kate Reid, Air Resources Engineer  
Fuels and Transportation Division  
Advanced Fuels & Vehicle Technologies Office, Freight & Transit Unit



# Benefits to California.

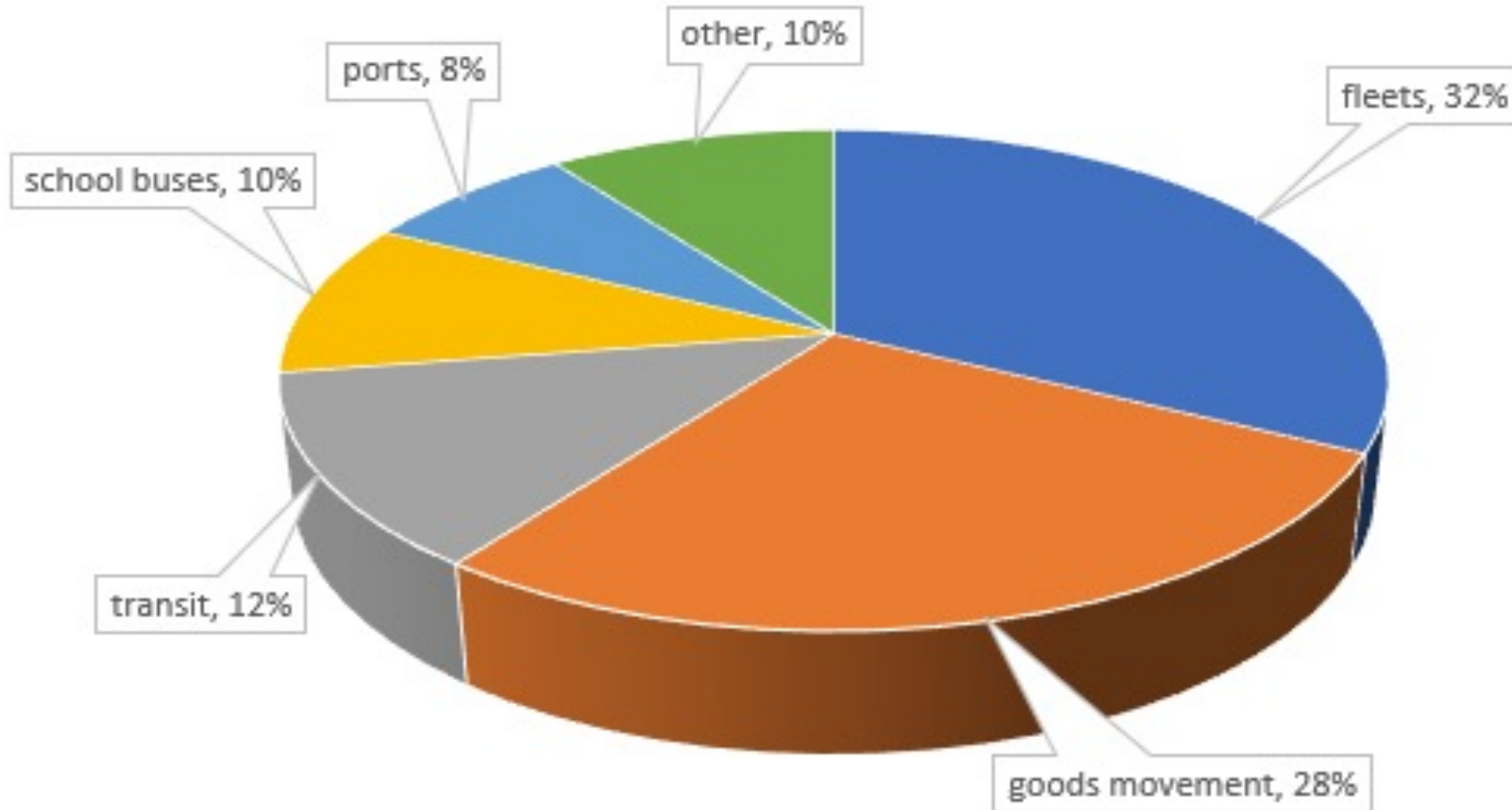
## Will Enable:

- Roadmaps
- Resiliency
- Replicability
- Compliance





# Vehicle Sectors Addressed







# Project Overview

## Los Angeles Cleantech Incubator (LACI) (ARV-21-038)

MD/HD electric charging infrastructure for the greater Los Angeles area in preparation and support of the 2028 Olympic Games





# Project Overview

## San Joaquin Regional Transit District (RTD) (ARV-21-039)

MD/HD electric charging and hydrogen refueling  
infrastructure for San Joaquin Transit District's fleet





# Staff Recommendation

## Approve

- 2 grant agreements

## Adopt

- Staff's determination that projects are exempt from CEQA



# **Item 10: ECAA Funded Loan for the Pleasant Valley Recreation and Parks District**

October 13, 2021 Business Meeting

Sean Lockwood, Associate Energy Specialist  
Renewable Energy Division, Local Assistance and Finance Office





# Benefits of the ECAA Loans to Californians

Helps Improve Health Outcomes



Creates Green Jobs

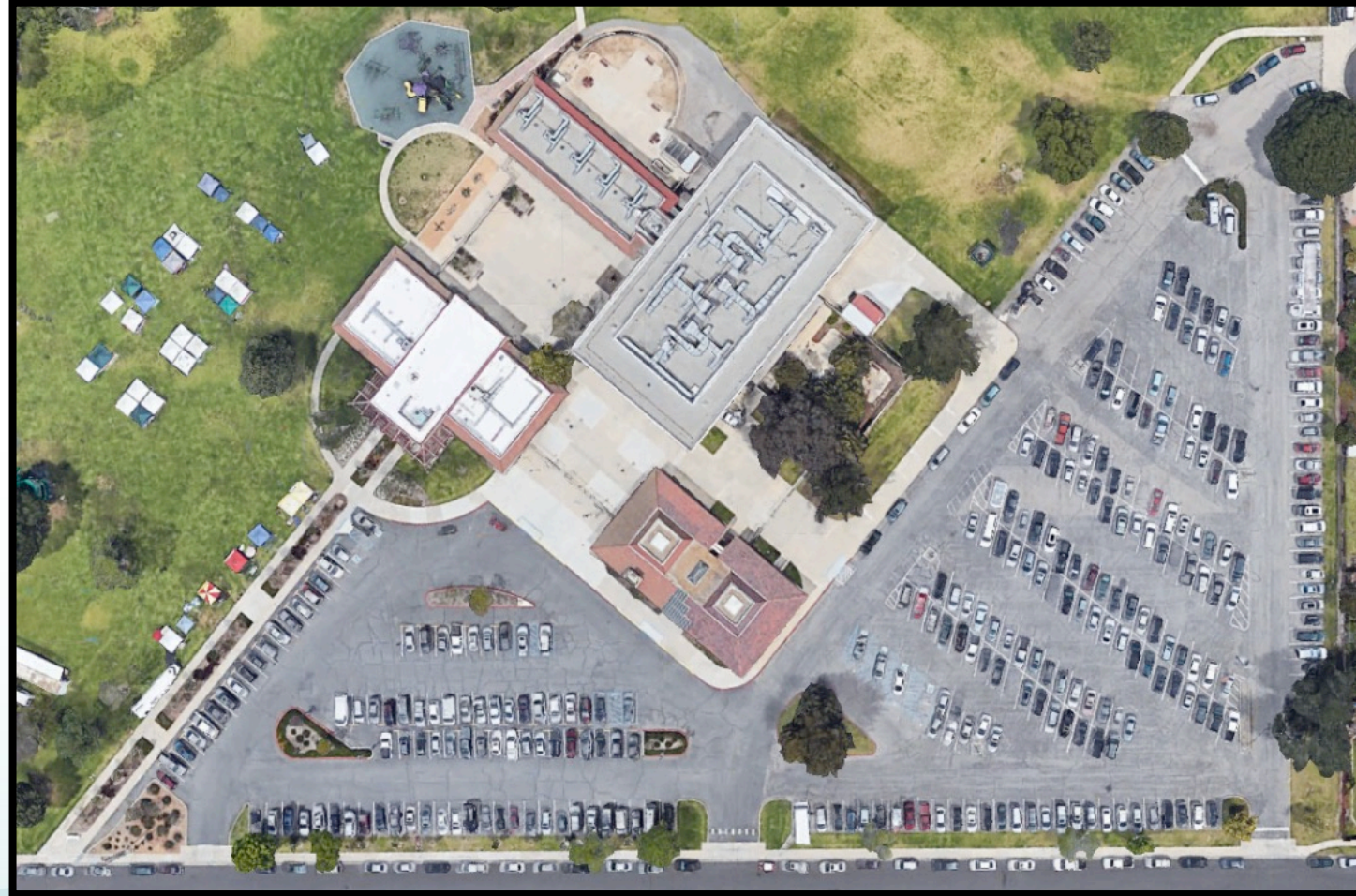


Lowers Utility Bills



# Project Overview

- \$192,618 loan at 1% interest
- LED lighting upgrades
- Lighting control installations at 11 district sites
- Thermostat upgrades at district's community center







# Project Energy Cost Analysis Summary

Loan Amount	Annual Energy Use Savings	Annual Energy Cost Savings
\$192,618	221,799 kWh	\$32,418



# Staff Recommendation

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- Approve loan agreement
- Adopt staff's determination that project is exempt from CEQA





# **Item 11: Research Hub for Electric Technologies in Truck Applications**

October 13, 2021 Business Meeting

Liet Le  
Electric Generation System Specialist  
Energy Research and Development Division



# Benefits to Californians



- Advance efficient high-power charging
- Transition heavy-duty drayage trucks to battery electric
- Target emission reduction in South Coast Air Basin

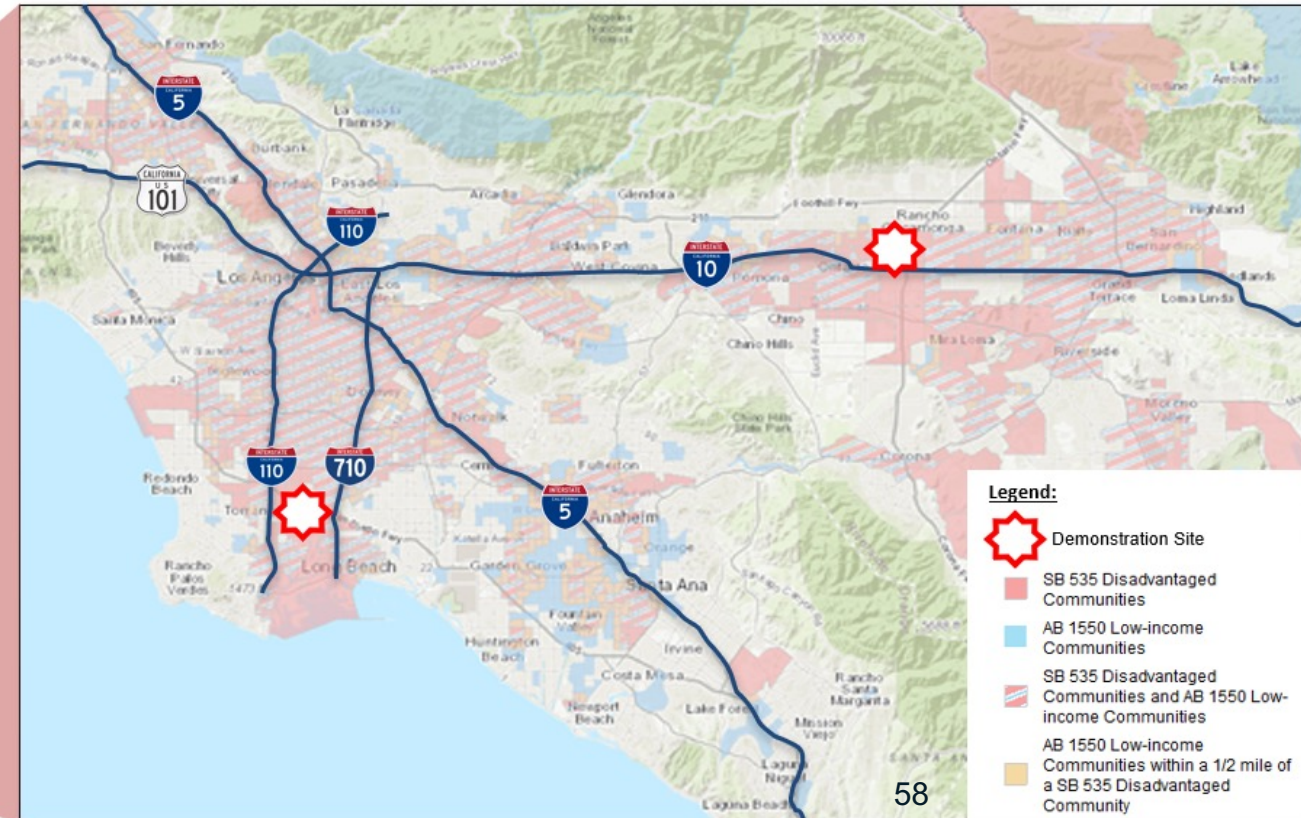
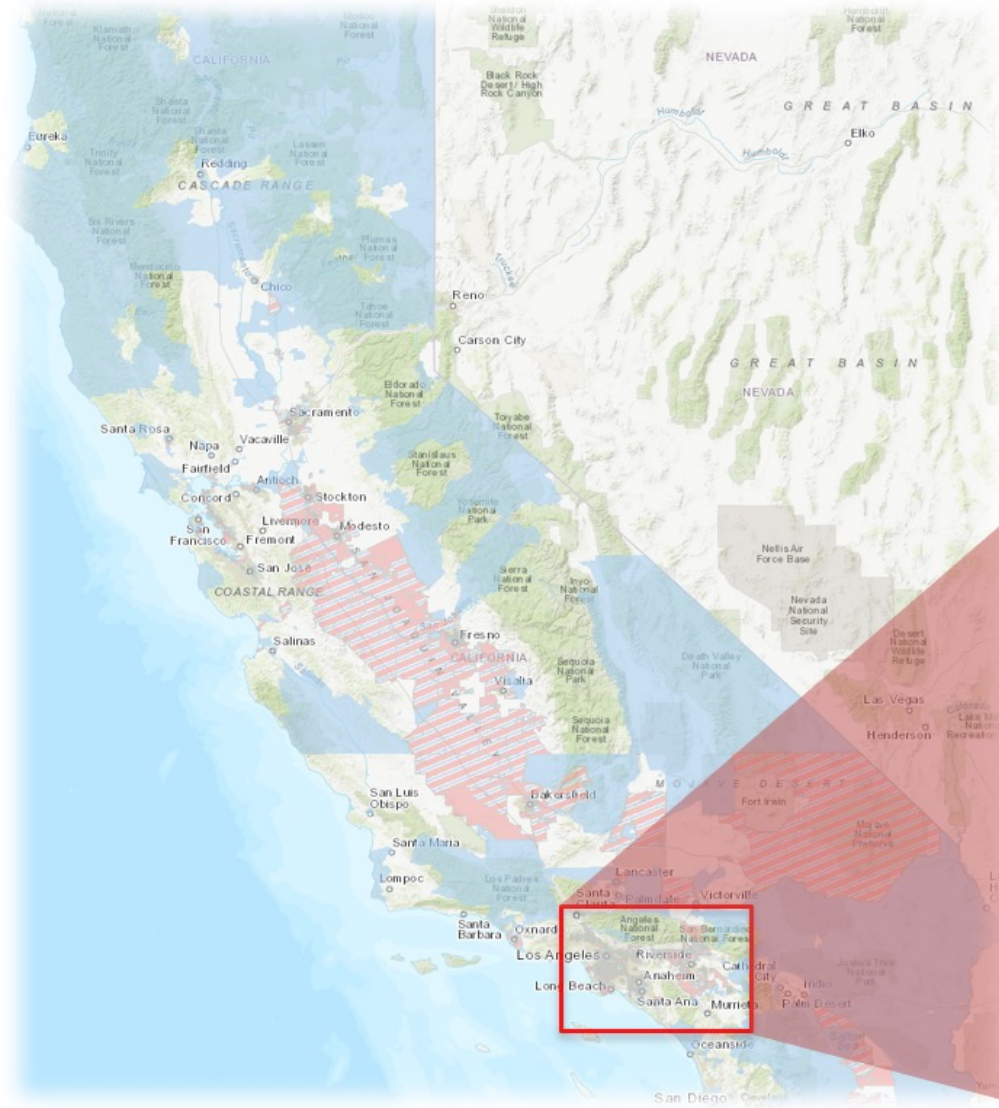






# Overview

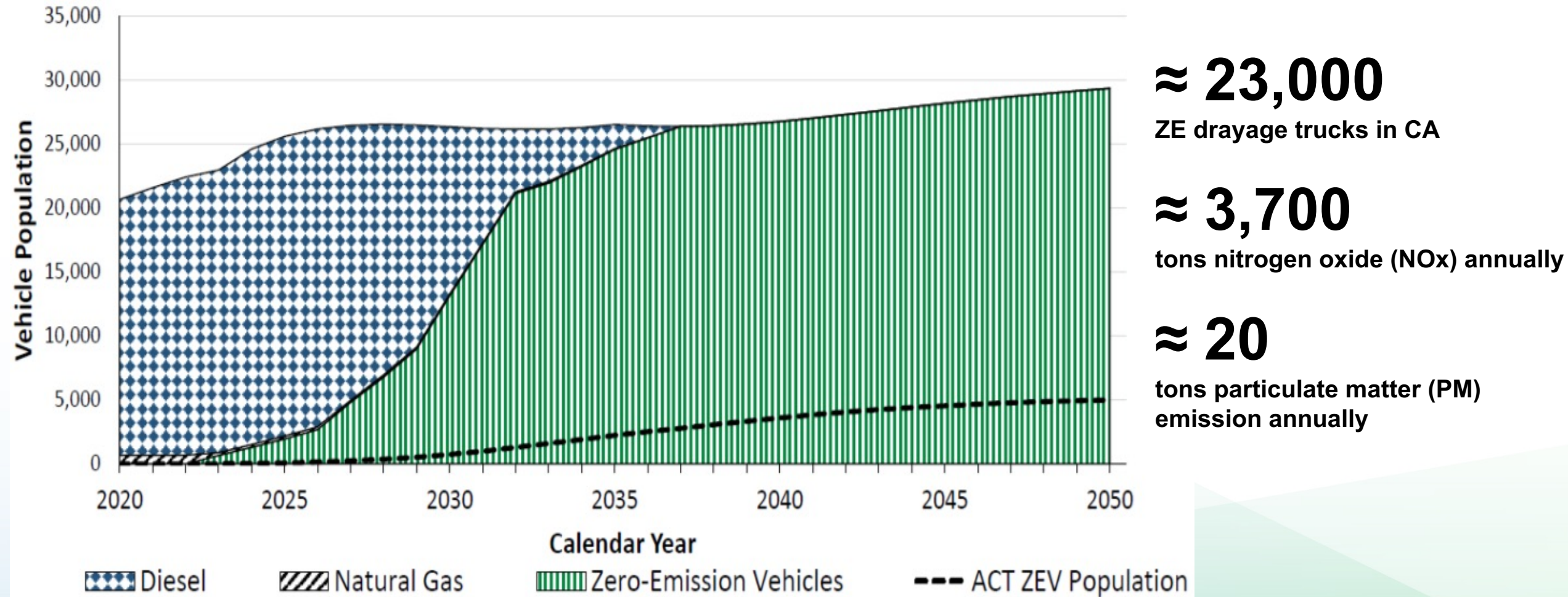
- Assess freight routes/operational conditions
- Deploy 2 innovative high-power public charging sites





# Market Potential.

Preliminary Zero Emission (ZE) Drayage Truck Populations from CARB Regulations

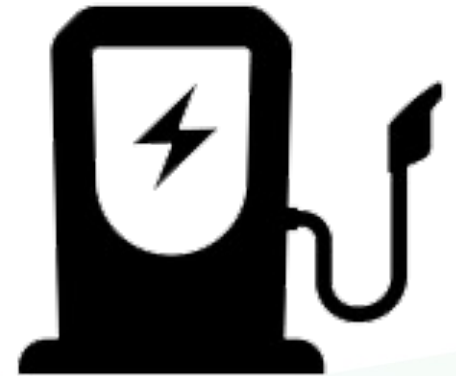






# Staff Recommendation

- Approve grant agreement
- Adopt staff's determination that project is exempt from CEQA





# **Item 12: Evaluating Bi-Directional Energy Transfers and Distributed Energy Resource Integration for Medium- and Heavy-Duty Fleet Electrification**

October 13, 2021 Business Meeting

Ben Wender  
Electric Generation System Program Specialist  
Research and Development Division



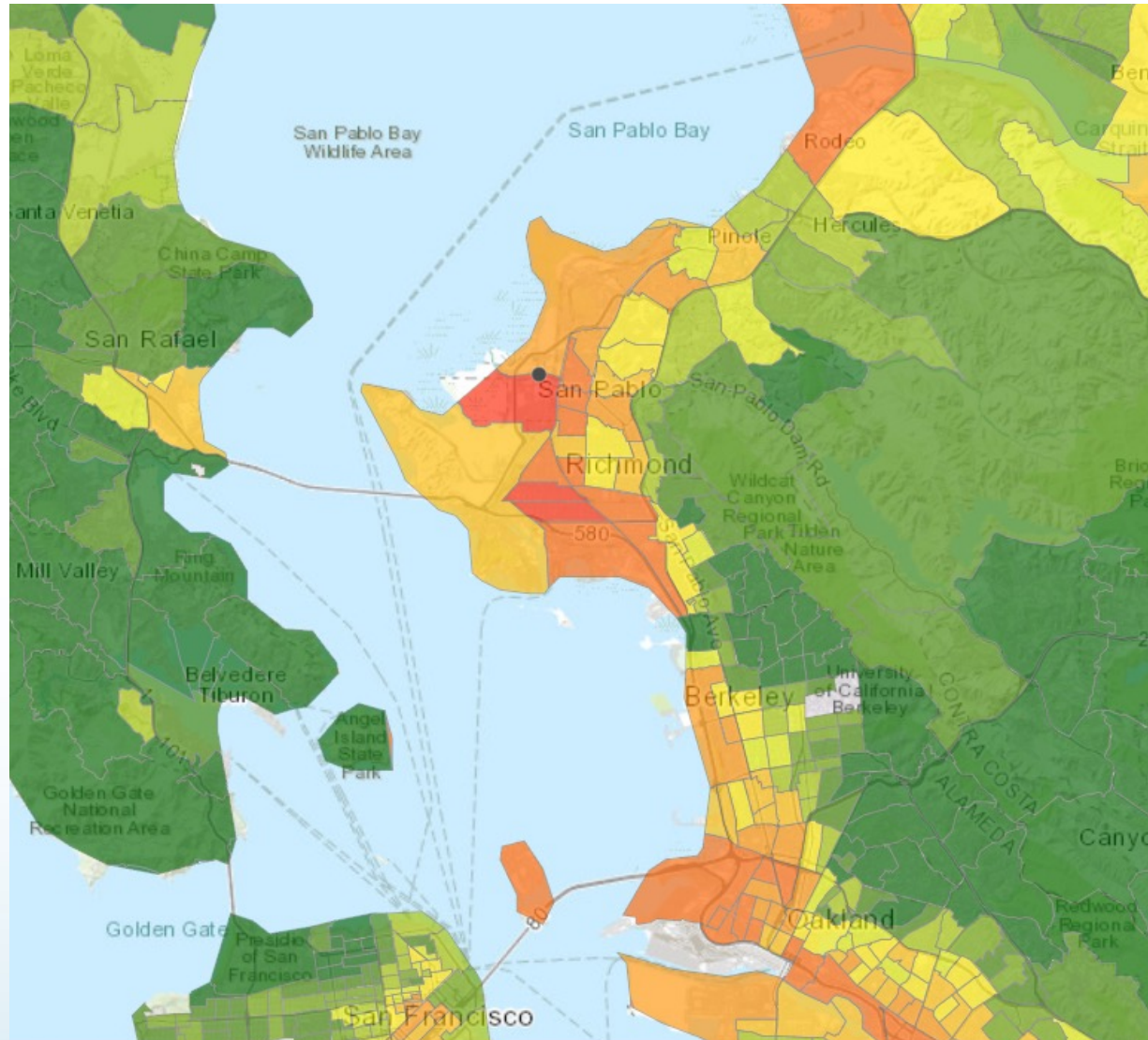
# Benefits to Californians

- Reduce stress on grid
- Reduce charging costs
- Provide site and community resilience
- Maximize emissions reductions

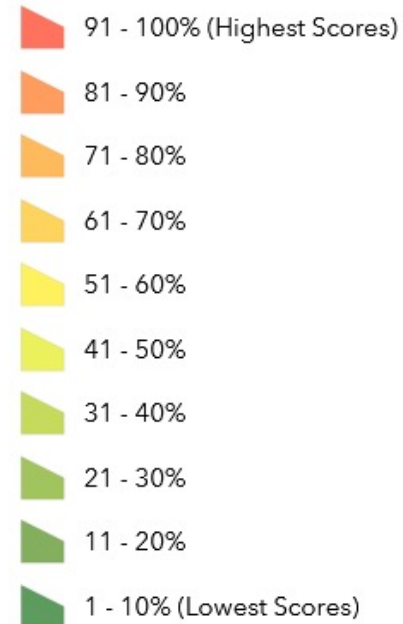




# Local Impact



CalEnviroScreen 3.0 Results (June 2018 Update)







# Project Overview

## Building a Scalable and Repeatable School Bus Electrification Business (BusyBees)





# California Market Potential



Aerial view of First Student bus yard in Richmond

**≈ 25,000**

school buses in California

**≈ 1.5 GW**

flexible electric grid capacity

**> 1,000,000**

homes could be powered



# Staff Recommendation.

- Approve grant agreement
- Adopt staff's determination that project is exempt from CEQA

